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# Correspondence

*Letters should not exceed 400 words and should be typed double spaced (including the references) and be signed by all authors*

TO THE EDITOR, *Genitourinary Medicine*

**Penicillinase producing gonococci: a spent force?**

Sir,

The experience of Ison *et al* of penicillinase producing *Neisseria gonorrhoeae* (PPNG) being a spent force in London[1] is echoed in Leicester, where we have seen a dramatic fall in cases since 1983. In that year we saw a total of 68 new patients infected with PPNG strains out of a total of 555 cases of gonorrhoea, and during March 1983 the proportion of gonorrhoea caused by PPNG strains was 31%. The initial epidemic was quelled by careful contact tracing and appropriate chemotherapy with spectinomycin, ampicillin, probenecid, or augmentin.

Since then the number of PPNG strains has decreased, so that in 1986 we saw only five cases, and so far in 1987 there have been three cases. We feel that despite the valiant effort on the part of the gonococcus to adapt itself to a changing world, it too will soon be joining the treponeme in "the second division" of genitourinary medicine.

Yours faithfully,

*Peter Fisk**

*Andrew Lewis*†

*Department of Genitourinary Medicine,
Leicester Royal Infirmary, and
†Medical School,
University of Leicester,
Leicester LE1 7RH

**Reference**

1 Ison CA, Gedney J, Harris JRW, Easmon CSF. Penicillinase producing gonococci: a spent force? *Genitourin Med* 1986:**62**:302–7.

TO THE EDITOR, *Genitourinary Medicine*

**Oropharyngeal carriage of *Neisseria gonorrhoeae* and its response to treatment in patients with anogenital infection**

Sir,

The prevalence of pharyngeal gonorrhoea in the United Kingdom remains unclear. In some areas, however, prevalences of 10% in women, 4·2% in heterosexual men, and 27·3% in homosexual men have been reported.[1,2] Several studies have shown that standard single dose regimens used to treat genital gonorrhoea are ineffective against pharyngeal infection.[3,4] The present study was undertaken to clarify the prevalence of pharyngeal gonorrhoea in patients in Liverpool with anogenital gonorrhoea, and to assess the role of oral sexual practices in the pathogenesis of this condition.

Throat swabs were obtained from 338 women, 202 heterosexual men, and 18 homosexual men with anogenital gonorrhoea. *Neisseria gonorrhoeae* was isolated from 16% (55/338) of women, 6% (12/202) of heterosexual men, and 28% (5/18) homosexual men. Of those who practised oral sex, the pharyngeal prevalence was 37% (49/134) in women, 14% (10/71) in heterosexual men, and 27% (4/15) in homosexual men compared with 3% (6/204) in women ($p < 0{\cdot}001$), 2% (2/131) in heterosexual men ($p < 0{\cdot}001$), and 33% (6/18) in homosexual men ($p > 0{\cdot}50$) who did not practise oral sex.

We did not find any significant difference in sensitivity to antibiotics between pharyngeal and anogenital isolates. The minimum inhibitory concentration (MIC) of penicillin was < 0·125 mg/l in 86% (62/72) isolates, and the MICs of oxytetracycline, spectinomycin, and erythromycin were < 2 mg/l, < 20 mg/l, and < 1 mg/l respectively. None of the pharyngeal isolates were $\beta$ lactamase producing strains.

The differences in response to treatment between men and women were small and not significant. Of 62 patients who received single dose regimens, eight (13%) failed to return for follow up. Of those who were treated with single dose regimens, the pharyngeal infection persisted in 39% (11/28) of patients treated with spectinomycin 2 g, 40% (8/20) of those treated with procaine penicillin 1·2 MIU and probenecid 1 g, and 25% (1/4) of those treated with amoxycillin 3 g plus probenecid 1 g.

Patients in whom single dose regimens had failed were treated with oxytetracycline 250–500 mg four times a day for seven days (12 patients), co-trimoxazole two tablets three times daily for seven days (four patients), or erythromycin 250–500 mg four times a day for seven days (three patients). The failure rates were 17% (2/12) with oxytetracycline and 25% (1/4) with co-trimoxazole regimens, whereas the pharyngeal infection persisted in all three patients treated with erythromycin.

In one patient the pharyngeal infection persisted despite five successive courses of treatment, with spectinomycin 2 g, cefotaxime 1 g and 2 g plus probenecid 1 g, procaine penicillin 4·8 MIU plus probenecid 1 g, and oxytetracycline 500 mg four times a day for seven days. The infection was finally treated successfully with co-trimoxazole four tablets twice daily for four days.

The reasons for the differences in response to treatment between pharyngeal and anogenital sites are not clear. The role of oral microbial flora in the bioavailability of antibiotics, as well as the tissue and salivary concentrations of antibacterial agents achieved after single dose treatment require further evaluation.

We conclude that orogenital sexual practices play an important part in the pathogenesis of pharyngeal gonorrhoea. Throat swabs should therefore be taken from all patients suspected of having gonorrhoea, including heterosexuals who practise oral sex. All patients with pharyngeal gonorrhoea should be followed up to ensure cure, as the current standard single dose treatment regimens used to treat anogenital infections may fail to eradicate pharyngeal gonorrhoea. Our high default rate (13%) after initial treatment emphasises the need to find a suitable single dose regimen that will eliminate *N gonorrhoeae* from the oropharynx as well as anogenital sites.

Yours faithfully,

*IH Ahmed-Jushuf*
*MG Bradley*
*PMS Rao*

Department of Genitourinary Medicine,
Royal Liverpool Hospital,
Prescot Street, Liverpool L7

**References**

1 Kinghorn GR, Rashid S. Prevalance of rectal and pharyngeal infection in women with gonorrhoea in Sheffield. *Genitourin Med* 1979:**55**:408–10.

2 Sulaiman MZC, Bates CM, Bittiner JB, Dixon CA, Slack RCB. Response of pharyngeal gonorrhoea to single dose penicillin treatment. *Genitourin Med* 1987;**63**:92–4.

3 Bro-Jorgensen A, Jensen T. Gonococcal pharyngeal infection. Report of 110 cases.